

COVID-19 RESEARCH NEWSLETTER

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Clinical Decision-Making Support For COVID-19 Based on Data Driven Artificial Intelligence for Clinical Severity and Treatment Response

The COVID-19 crisis has taken a pandemic proportion, affecting around 210 countries by mid-April 2020. The major concern of this pandemic is the burden created over national health systems due to its exponential spread trend world-wide. Therefore, the occupancy and the functionality of intensive care units are to be utilized to their maximum capacity as happened in Italy. The current situation leverages the use of Artificial Intelligence (AI) tools in the COVID-19 time. AI can help in addressing the clinical challenges related to COVID-19 in a reinventive manner.



The objective of this study is to create a set of AI and Machine learning (ML) models that use observational data and Electronic Health Records (EHRs) to help clinicians in decision-making regarding the management of COVID-19 cases. These models will investigate the clinical characteristics of COVID-19 patients to identify the risk factors for clinical severity and predictors for treatment outcome. Subsequently, we can develop a predictive tool for COVID-19 patients to determine higher risk patients on initial presentation.

We are proposing the first step toward an AI framework with predictive models of real COVID-19 patients' data in order to be clinically applicable. This will facilitate the triage of COVID-19 cases based on their severity at the time of their presentation to Emergency Departments and will help clinicians to manage their hospital resources in terms of the utilization of Intensive Care Units' beds.

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If you are interested in sharing your COVID-19 related research, please send your contribution to research.office@uaeu.ac.ae